

Application No. 10/755,932

Reply to Office Action

REMARKS

Applicants have carefully reviewed and considered the Office Action dated February 25, 2008 and the references cited therein. Applicants have amended claims 1 and 5 to improve their form. Applicants believe the application is now in condition for allowance. Accordingly, favorable reconsideration in light of the foregoing amendments and following remarks is respectfully requested.

Claims 1-8 stand rejected under 35 U.S.C. § 103 as obvious in view of Furst (U.S. Patent 6,245,028) combined with Gilboa (U.S. Patent 6,380,732). Applicants respectfully traverse this rejection. In rejecting the claims, the Examiner has indicated that Furst teaches a manipulator for performing medical procedures that includes a positioning mechanism and a remote position tracking system capable of tracking the position of the medical tool relative to a predetermined frame of reference in three dimensions. The Examiner acknowledges that Furst does not teach a position tracking system including an electromagnetic field generator, but asserts that it would have been obvious to use the tracking system of Gilboa in the place of the position tracking system of Furst.

Applicants respectfully submit that the combination of Furst and Gilboa is not well taken. Specifically, as an initial matter, Furst does not teach a remote position tracking system capable of tracking the position of its biopsy needle in three dimensions because it does not directly track the position of the biopsy needle. In particular, Furst teaches using "a detector incorporated in each of the multiple joints or segments of the needle support arm 230 to sense an amount of rotation for that joint or an amount of expansion/retraction for that segment." (Col. 8, lines 29-32). Thus, Furst is sensing the position of the rotary joints and/or extendable segments, not tracking the position of the biopsy needle itself. The position signals are relayed back to a haptic needle simulator 250 to enable the haptic needle simulator to mimic the motion experienced by the biopsy needle. Furst also discloses using a diagnostic imaging apparatus 100 capable of generating continuous medical diagnostic images of a subject updated in real-time. (Col. 4, lines 60-64). Furst teaches that the diagnostic imaging apparatus can be used to observe the needle progression during a biopsy procedure in real-time using a video monitor 160. (Col. 6, lines 4-9).

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Significantly, using a detector to sense the position of the rotary joints and extendable segments of the needle support arm is not a *remote* position tracking mechanism since it is completely integrated into the positioning mechanism itself. No portion of the position sensing mechanism of Furst is located remotely from the Furst needle support arm as required by amended independent claims 1 and 5. Since Furst does not provide a true remote position tracking system for the biopsy needle, the rejection cannot be based on a simple switching of the "remote tracking system" of Furst for the tracking system of Gilboa because Furst does not have a "tracking system" in the first instance.

Providing the Furst positioning mechanism with a non-contact tracking system such as disclosed in Gilboa to track the position of the biopsy needle is unnecessary. The detectors on the rotary joints and extendable segments of the Furst needle support arm 230 in combination with the real-time images on the video monitor provided by the diagnostic imaging apparatus 100 are all that is needed to control movement of the biopsy needle to the desired location. Since the tracking system of Gilboa would provide no useful functionality in terms of the positioning of the biopsy needle, there is no good reason for combining the references in the manner proposed by the Examiner. As such, claims 1-8 are patentable over the Furst and Gilboa references.

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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